

Michigan's West Nile Virus Website

www.michigan.gov/westnilevirus

Julie Rose

MI Department of Natural Resources




Michigan Department of Natural Resources

Michigan Emerging Diseases Issues - Microsoft Internet Explorer provided by MI Dept of Natural Resources

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Emerging Disease Issues

Diseases that may affect Humans and Animals



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Bovine Tuberculosis

West Nile Virus

Chronic Wasting Disease

Rabies

Lyme Disease

Diseases to Watch For

[LOGIN to Michigan.gov >](#)

Introduction

- [About Emerging Diseases](#)
Emerging Infectious diseases that may be transmitted between animals and humans are a concern for all people, no matter what their age, gender, lifestyle, ethnic background, or economic status.
- [Partners in disease eradication and emerging diseases preparedness](#)
Michigan is fortunate to have agencies and organizations jointly participating in the surveillance, control, and/or eradication of diseases concerning wildlife, domestic animals, and humans in Michigan.
- [Why Emerging Diseases?](#)
Understanding how diseases spread between hosts is of major importance. Emerging diseases are often zoonotic, that is; diseases that *may* be transmitted between humans and animals.

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Quick Links

- > [Agency Press Releases](#)
- > [Check Your Wildlife Lab Results](#)
- > [Governor's CWD Task Force](#)

Seasonal Information

- [Beef Cattle TB Testing Deadline](#)
- [Importation of Game Animal Parts into Michigan](#)
- [2003 Deer Check Stations](#)
- [Check Your Wildlife Lab](#)

Sites of Interest

- [Center for Emerging Infectious Diseases - Michigan State University](#)
- [Centers for Disease Control \(CDC\)](#)

Internet



Emerging Disease Issues

Diseases that may affect Humans and Animals



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[Michigan.gov Home](#)

[Home](#) | [Site Map](#) | [Q & A](#)

Search

go

West Nile Virus

- > [Human Health Issues](#)
- > [Wildlife Health Issues](#)
- > [Pet Health Issues](#)
- > [Horse Health Issues](#)
- > [Testing Tables & Maps](#)
- > [Mosquito Control](#)
- > [Library](#)

Bovine Tuberculosis

Chronic Wasting Disease

Rabies

Lyme Disease

Diseases to Watch For

About West Nile Virus

- [How to Report a Dead or Sick Bird or Mammal](#)
Instructions and a link to the on-line reporting form used to report dead or sick wildlife in Michigan.
- [The West Nile Virus Working Group](#)
This multi-agency working group was formed in 2000 to address the threat of West Nile virus to Michigan.
- [WNV Testing](#)
Testing of dead corvids in Michigan for WNV in 2003 ended on October 31. For 2004, testing will resume on April 1st. Humans, domestic animals and non-corvid wildlife may be tested year round if WNV infection is suspected. Maps and tables will be updated when new results are received.
- [WNV Description & Distribution](#)
West Nile virus is a mosquito-borne virus that primarily infects and multiplies in birds.
- [History of West Nile Virus](#)
West Nile virus was first discovered in Uganda in 1937, and has recently spread beyond its traditional boundaries to Europe and the United States.
- [WNV Transmission and Development](#)
West Nile Virus is carried by birds and is transmitted through the bite of an infected mosquito.
- [WNV Clinical Signs and Pathology](#)
The majority of humans infected with West Nile virus will have no signs of illness or will experience a mild flu-like illness.
- [WNV Diagnosis](#)
Diagnosis generally begins with the observation of clinical signs consistent with West Nile virus and is confirmed by laboratory testing.
- [WNV Treatment and Control](#)
There is currently no specific treatment beyond supportive care for West Nile virus.
- [WNV Significance](#)
Members of the corvid family (crows, blue jays and ravens) are most severely impacted by West Nile virus, although it can infect and cause illness in horses, humans and other birds and mammals.

Current Issues

- [CDC West Nile Virus Activity Reports for the US](#)
Centers for Disease Control reports summarizing WNV surveillance data reported through ArboNet

Contacts

- [WNV Working Group](#)
- [County Health Department List](#)
- [Regional MDA Offices](#)
- [MDEQ Water Division District Offices](#)
- [DNR Field Offices](#)

WNV Conferences

- [2003 WNV Conference](#)
- [2003 Arbovirus Surveillance Workshop](#)

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- > [Agency Press Releases](#)
- > [Check Your Lab Test Results Online!](#)
- > [Michigan launches "Vet Net" Partnership initiated to enhance ...](#)
- > [Michigan's Electronic ID System for Livestock](#)
- > [Avian Influenza - CDC](#)
- > [BSE - USDA](#)
- > [BSE - MSU Issues Paper](#)
- > [Supplemental deer feeding banned statewide](#)
- > [Avian Influenza in South East Asia](#)
- > [Governor's CWD Task Force](#)
- > [Questions & Answers](#)
- > [Other WNV Websites](#)



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go

[Michigan.gov Home](#)

[Home](#) | [Site Map](#) | [Q & A](#)

West Nile Virus

- > [Human Health Issues](#)
- > [Wildlife Health Issues](#)
- > [Pet Health Issues](#)
- > [Horse Health Issues](#)
- > [Testing Tables & Maps](#)
- > [Mosquito Control](#)
- > [Library](#)
- [Press Release Archive](#)

Bovine Tuberculosis

Chronic Wasting Disease

Rabies

Lyme Disease

Diseases to Watch For

Publications

- [WNV Frequently Asked Questions](#)
- [WNV For Horse Owners, Diagnosis and Prevention](#)
- [Pesticide Regulations for Mosquito Control on Campgrounds](#)
- [Community Spray Programs](#)
- [WNV Information for Outdoor Workers](#)

Contacts

- [WNV Working Group](#)
- [County Health Department List](#)
- [DNR Field Offices](#)
- [Regional MDA Offices](#)
- [MDEQ Water Division District Offices](#)

Forms

- [MDCH Test Requisition Form](#)
- [MDCH Case Reporting Form](#)
- [Horse Reporting Form](#)
- [DCPAH Covid Submission Form \(for use by Health Departments\)](#)
- [MDCH Testing Kit Order Form \(for use by Health Departments\)](#)

Related Resources

- [Information for Health Care Providers](#)
- [Information for Game Bird Hunters](#)
- [Information for Ornithologists and Bird Banders](#)
- [Information for Lab and Field Workers](#)

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- > [Agency Press Releases](#)
- > [Governor's CWD Task Force](#)
- > [Other WNV Websites](#)
- > [How to Report a Dead or Sick Bird or Mammal](#)
- > [Q & A on West Nile Virus](#)

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[Home](#) | [Site Map](#) | [Q & A](#)

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Related Content

- > [Questions & Answers](#)
- > [Other WNV Websites](#)
- > [2001-02 WNV Surveillance Maps](#)
- > [2003 WNV Surveillance Maps](#)

- > [Human Health Issues](#)
- > [Wildlife Health Issues](#)
- > [Pet Health Issues](#)
- > [Horse Health Issues](#)
- > [Testing Tables & Maps](#)
- > [Mosquito Control](#)
- > [Library](#)

[Bovine Tuberculosis](#)

[Chronic Wasting Disease](#)

[Rabies](#)

[Lyme Disease](#)

[Diseases to Watch For](#)

How to Report a Dead or Sick Bird or Mammal



[Click here to report a sick or dead bird or mammal](#)

(Please look through the instructions below first.)

Use this form to report all species of birds and mammals found sick or dead.

[Click here for WNV Reporting Procedures Flow Chart](#)

Instructions on Using the On-Line Reporting Form:

[Do we want to laboratory test the animal you found?](#)

[Submitting corvid species \(crows, blue jays and ravens\) for laboratory testing](#)

[Submitting other bird species \(non-corvids\) and mammals for laboratory testing](#)

[Help with identification of corvids](#)

[Help with general bird identification](#)

[How to collect a specimen for testing](#)

[How to dispose of a dead bird or mammal](#)

[Purpose of new web-based reporting form](#)

[Domestic animals \(horses, livestock, pets\)](#)

How to Collect a Specimen (Dead Bird or Mammal) for Testing


If the reporting form indicates that we would like to test the animal, and you are willing to collect the animal for testing, please use disposable gloves to put the specimen in a double plastic bag. In general, WNV is not transmitted directly from dead birds or mammals to humans. However, to reduce the risk of transmission of other diseases, **always avoid bare-handed contact when handling dead animals.** If gloves are not available, you may turn a plastic shopping bag inside out and scoop up the specimen with the bag. Please maintain the specimen at refrigerated temperatures and do not allow to freeze. If you feel uncomfortable refrigerating the specimen, you may also keep it in a cooler or other container, surrounded by ice. However, it is important to make sure that the specimen remains dry.

BIRD IDENTIFICATION PAGE

Bird Pictures, Names and Descriptions

Birds of the Crow Family		
Name	Picture	Description
CROW (American Crow: <i>Corvus brachyrhynchos</i>) (Northwestern crow: <i>Corvus caurinus</i>)	 <p>Courtesy of HVPP Zoology Page</p>	LARGE Bird ~Length: 16-18 inches ~Wingspan: 39 inches ~Weight: 1 lb ~Colour: All black ~Short tail, broad wings
RAVEN (<i>Corvus corax</i>)	 <p>Photographer Unknown</p>	VERY LARGE Bird ~Length: 24 inches ~Wingspan: 53 inches ~Weight: 2.5 lb ~Colour: All black ~Long narrow wings, wedged shaped tail, heavy bill
BLUE JAY (<i>Cyanocitta cristata</i>)	 <p>E.T. Jones Copyright 1998 Courtesy of Provincial Museum of Alberta</p>	MEDIUM sized bird ~Length: 11 inches ~Wingspan: 16 inches ~Weight: 3 oz ~Colour: Blue and gray with white and black markings

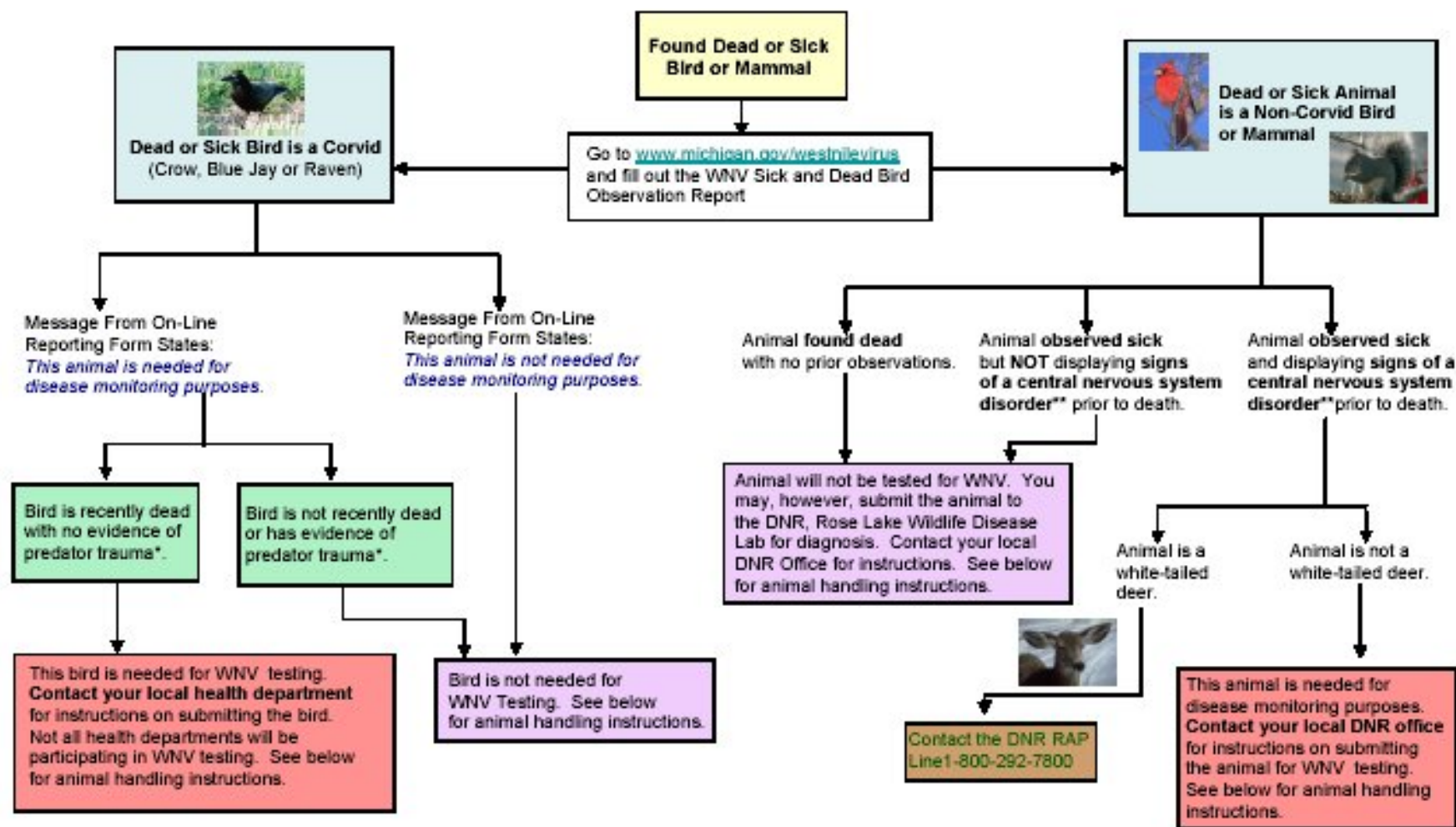
Birds Commonly Mistaken as Members of the Crow Family

Name	Picture	Description
RED-WINGED BLACKBIRD (<i>Agelaius phoeniceus</i>)	 <p>Courtesy of "Backyard Birding" Indiana U.S.A.</p>	SMALL bird ~Length: 8-9 inches ~Wingspan: 13 inches ~Weight: 2 oz ~Colour: All black except for red and white wing patches
COMMON GRACKLE (<i>Quiscalus quiscula</i>)	 <p>Courtesy of "Backyard Birding" Indiana U.S.A.</p>	MEDIUM sized bird ~Length: 11-14 inches ~Colour: All black with bluish sheen to feathers
EUROPEAN STARLING (<i>Sturnus vulgaris</i>)	 <p>E.T. Jones Copyright 1998 Courtesy of Provincial Museum of Alberta</p>	SMALL bird ~Length: 8-9 inches ~Wingspan: 16 inches ~Weight: 3 oz ~Colour: Black to brown body with white markings
RELATIVE SIZE OF BIRDS	 <p>Courtesy of Hugh Whitney</p>	Left to right: Starling (small); Crow (large); Raven (very large). This picture is to help in identification of bird species by providing a comparison of size.

Canadian Cooperative Wildlife Health Center

[BACK TO THE TOP](#)

Instructions on Submitting an Animal for West Nile Virus (WNV) Testing



Animal Handling Instructions:

Instructions on disposal: Always avoid bare handed contact when handling dead animals. You may dispose of the animal by burying it or by disposing of it in your garbage, in a plastic bag.

Instructions on collection: Always avoid bare-handed contact when handling dead animals. Double bag the animal in plastic bags and refrigerate in your refrigerator or in a small cooler with ice. Do not allow the animal to freeze and keep the animal dry.

*Recently dead animals appear to have died within the last 48 hours and have no evidence of decomposition (noxious odor, presence of small, white fly larvae (maggots). Animals with predator trauma may have open body cavities and exposed muscles.

**Signs of a central nervous system disorder include: uncoordinated flying or walking, weakness, slow movement, tremors, abnormal head posture, odd behavior.

DATE OF OBSERVATION: April 23 2003

LOCATION OF OBSERVATION: (see notes)

Zip Code: 48823

Nearest City, Town or Village: East Lansing

County: Select One

Street Address: 8562 E Stoll Rd

Nearest: Alcona d Upton

ANIMAL

Class: Select only one

☒ Bird

☐ Mammal

Number Observed:

Symptoms: (check all that apply)

☐ Eyes crusted

☐ Seizures

☐ Other (describe):

Select One

Unknown

Other

Crow, American

Jay, Blue

Raven, Common

Blackbird, Brewers

Blackbird, Red-winged

Bluebird, Eastern

Bobolink

Bunting, Indigo

If "Unknown," please describe the animal or if "Other," please enter the species:

Select One

Found dead

Found sick in the wild and not removed

Not treated, but currently being monitored

Not treated and recovered

Not treated and died

Not treated and euthanized

Currently being treated

Treated and recovered

Treated and died

Treated and euthanized

COMMENTS:

OBSERVER INFORMATION: (see notes)

Name: Julie Rose

Phone: 517 - 373 - 9358

E-mail: rosejul1@michigan.gov

Licensed Rehabilitator or Veterinarian? ☒ No ☐ Yes

Michigan Audubon Member? ☒ No ☐ Yes

Submit Reset



Diseased Wildlife Observation Report

Your information has been received.

Thank you for your assistance.

This animal is needed for disease monitoring purposes.

Please contact your local health department for directions on submitting this bird for West Nile Virus testing.

**If you wish to submit reports for additional observations,
please use the "back" button on your browser to return to the observation report form.**

Close Window

DATE OF OBSERVATION: April 23 2003

LOCATION OF OBSERVATION: (see [notes](#))

Zip Code: 48823 Nearest City, Town or Village: East Lansing
County: Ingham Street Address: 8562 E Stoll Rd
Nearest Crossroads: Stoll and Upton

ANIMAL(S) OBSERVED:

Class: <input type="radio"/> Bird <input checked="" type="radio"/> Mammal	Species: (select only one) Unknown Other Badger, American Bat, Big Brown Bat, Little Brown Bat, Red Bear, Black Beaver Bobcat Cat, Feral Chipmunk, Eastern	If "Unknown," please describe the animal or if "Other," please enter the species: <input type="text"/>
Number Observed:	Current Status: Found dead	
Symptoms: (check all that apply) <input type="checkbox"/> Eyes crusted <input type="checkbox"/> Seizures <input type="checkbox"/> Other (describe):	<input type="checkbox"/> Tremors <input type="checkbox"/> Malnourished	<input type="checkbox"/> Slow Moving <input type="checkbox"/> Dehydrated <input type="checkbox"/> Unable to Fly <input type="checkbox"/> Ruffled Feathers

COMMENTS:

OBSERVER INFORMATION: (see [notes](#))

Name: Julie Rose
Phone: 517 - 373 - 9358
E-mail: rosejul1@michigan.gov
Licensed Rehabilitator or Veterinarian? ☒ No ☐ Yes
Michigan Audubon Member? ☒ No ☐ Yes

Submit Reset



Diseased Wildlife Observation Report

Your information has been received.

Thank you for your assistance.

This animal is needed for disease monitoring purposes.

ONLY IF THERE WERE SIGNS OF CENTRAL NERVOUS SYSTEM PROBLEMS PRIOR TO DEATH. Please contact your local DNR Field Office for submission to the lab for disease testing.

**If you wish to submit reports for additional observations,
please use the "back" button on your browser to return to the observation report form.**

Close Window

2003 Surveillance Maps

- **What is a Corvid?**
A corvid is a bird that is a member of the Corvidae family (or crow family), which includes crows, blue jays and ravens. Corvids appear to be especially susceptible to West Nile virus infection and can be used as an early indicator of the virus in an area.
- **WNV Testing**
Testing of dead corvids in Michigan for WNV in 2003 ended on October 31. Human testing will continue through November 15, after which it will be conducted on a case by case basis. Testing of domestic animals and non-corvid wildlife will continue year round if WNV infection is suspected. Maps and tables, after final testing dates will only be updated if and when new results are received.
- **Corvids Reported by Zip Code**
Map of corvids reported via the on-line reporting form found dead or with symptoms of West Nile virus infection.
- **Corvids Submitted for WNV Testing by Zip Code**
Map of corvids submitted to Michigan State University (MSU), Diagnostic Center for Population and Animal Health (DCPAH) for West Nile virus testing. Not all birds submitted are tested.
- **WNV Positive Corvids by Zip Code**
Map of corvids testing positive for West Nile virus in 2003 at MSU, DCPAH.
- **Corvid Testing Results by County**
Map of corvids testing positive for West Nile virus in 2003, by county at MSU, DCPAH.
- **Human Testing Results**
Map of human testing results confirmed by the Michigan Department of Community Health, Bureau of Laboratories.
- **Equine Testing Results**
Map of results of testing on equines (horses) submitted to MSU, DCPAH.
- **Domestic and Zoo Animal Testing Results**
Map of results of testing on domestic and zoo animals (excludes horses) submitted to MSU, DCPAH.
- **Wildlife Testing Results**
Map of results of testing on wild birds and mammals (excludes corvids) submitted to Michigan State University, Diagnostic Center of Population and Animal Health.
- **Mosquito Testing Results**
Map of results of testing on mosquitoes by MSU, Department of Microbiology and Molecular Genetics.
- **Other Arbovirus Testing Results**
Map of results of testing for arboviruses (insect-borne viruses) other than WNV in humans, as diagnosed by MDCH, BQL.

2003 Tables

- **Corvids Reported by County**
Table of corvids reported via the on-line reporting form, updated daily at 4 am. Only counties with corvids reported sick or dead will be listed in the drop-down box.
- **Week-by-Week Summary of Corvids Reported by County**
Table of corvids reported via the on-line reporting form, by week and by county. Corvid numbers per week are based on the date the bird was observed sick or dead. Only counties with corvid birds reported will be listed.
- **All Wildlife Reported**
Table of all wildlife reported (includes corvids) via the on-line reporting form, updated daily at 4 a.m. The first report received was on March 18th.
- **Corvid Testing Results by County**
Table of testing results on corvids by county, submitted to MSU, DCPAH. This table is updated on Mondays and Thursdays.
- **Wildlife Testing Results**
Table of testing results on non-corvid birds and mammals submitted to MSU, DCPAH. Table is updated on Mondays and Thursdays.
- **WNV Human Cases**
West Nile virus human cases in 2003 by county, age, sex and fatality, confirmed by the Michigan Department of Community Health, Bureau of Laboratories.
- **Equine Testing Results**
Table of testing results on equines (horses) submitted to MSU, DCPAH. Table is updated on Mondays and Thursdays.
- **Domestic and Zoo Animal Testing Results**
Table of testing results on domestic and zoo animals (excludes horses) submitted to MSU, DCPAH. Table is updated on Mondays and Thursdays.
- **Mosquito Testing Results**
Table of testing results on mosquitoes tested by MSU, Department of Microbiology and Molecular Genetics.

2002 Maps

- **All Positive Species Map**
- **Positive Corvids and Infected Counties**
- **Lab Positive Human Cases**
- **Positive Equine Counties**
- **Other Arboviruses (Insect-Borne viruses) in Humans**

2001 Maps

- **Positive Mosquito Pools**
- **Positive Corvids and Infected Counties**

2002 Tables

- **Positive Corvids by County**
- **Results of Wildlife Testing**

2001 Tables

- **Positive Corvids by County**
- **Results of Wildlife Testing**



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Crow Family Birds Reported For Ingham County

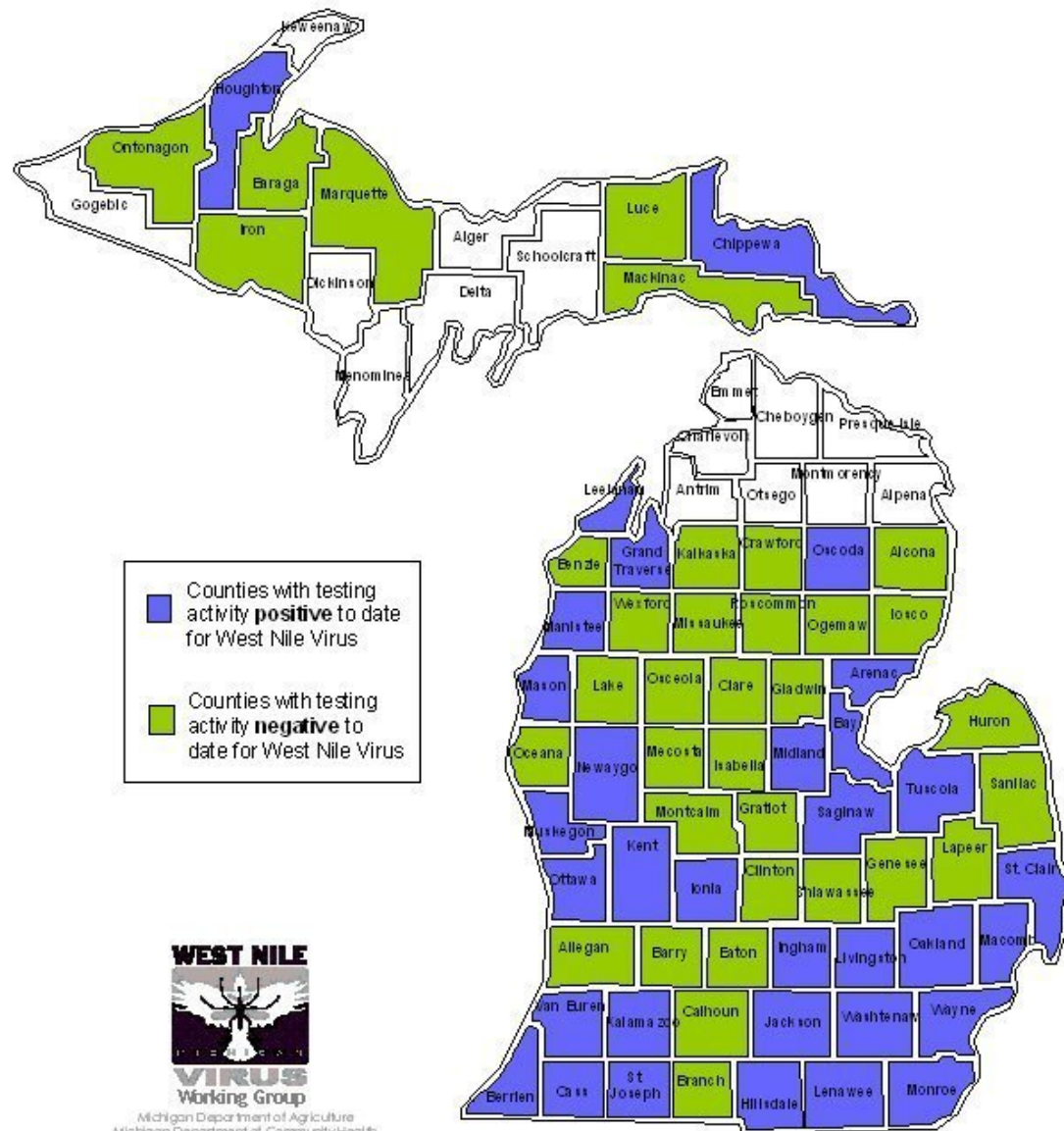
Week	Total Reported
TOTAL REPORTED	81
04/23/2003 - 04/29/2003	2
04/30/2003 - 05/06/2003	8
05/07/2003 - 05/13/2003	1
05/14/2003 - 05/20/2003	3
05/21/2003 - 05/27/2003	5
05/28/2003 - 06/03/2003	2
06/04/2003 - 06/10/2003	2
06/11/2003 - 06/17/2003	6
06/18/2003 - 06/24/2003	5
06/25/2003 - 07/01/2003	8
07/02/2003 - 07/08/2003	4
07/09/2003 - 07/15/2003	4
07/16/2003 - 07/22/2003	2
07/23/2003 - 07/29/2003	3
08/06/2003 - 08/12/2003	2
08/13/2003 - 08/19/2003	5
08/20/2003 - 08/26/2003	3
08/27/2003 - 09/02/2003	1
09/03/2003 - 09/09/2003	3
09/10/2003 - 09/16/2003	3
09/17/2003 - 09/23/2003	2
09/24/2003 - 09/30/2003	3
10/01/2003 - 10/07/2003	2
10/08/2003 - 10/14/2003	1
10/22/2003 - 10/28/2003	1

1/15/2004

Please select a county

Go

2003 West Nile Virus Corvid Testing Results
As of December 31, 2003



Michigan Department of Agriculture
Michigan Department of Community Health
United States Department of Agriculture
Michigan Department of Natural Resources
Michigan Department of Environmental Quality
Michigan State University

Corvid submissions by county, 2003

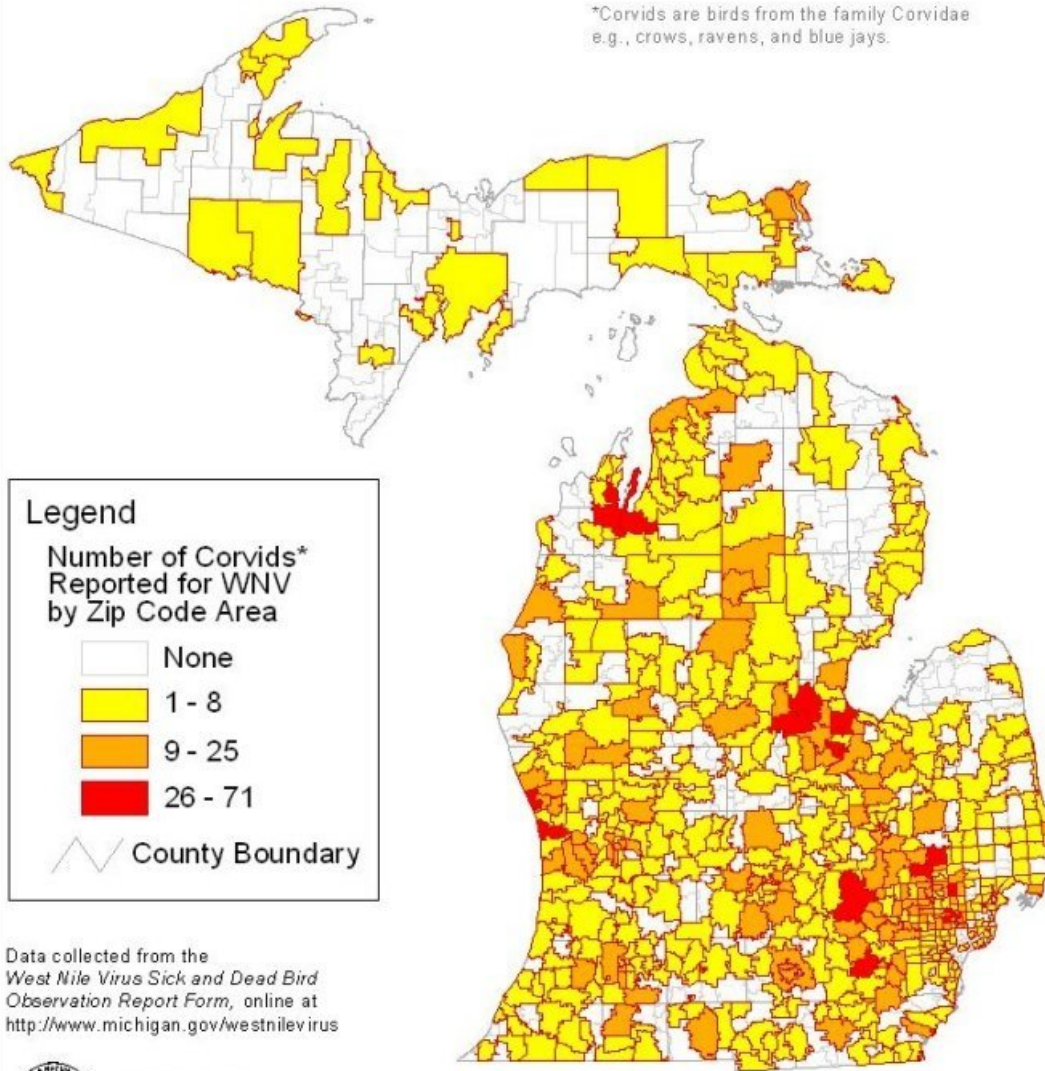
County	Number Submitted	Number Tested	Number Positive
Alcona	4	2	0
Allegan	4	2	0
Arenac	6	5	4
Baraga	1	1	0
Barry	5	3	0
Bay	33	29	3
Benzie	2	2	0
Berrien	14	10	4
Branch	2	1	0
Calhoun	4	1	0
Cass	6	3	1
Cheboygan	1	0	0
Chippewa	12	7	1
Clare	6	5	0
Clinton	4	1	0
Crawford	1	1	0
Delta	1	0	0
Eaton	4	2	0
Gladwin	4	4	0
Gd Traverse	9	8	2
Gratiot	7	4	1
Hillsdale	3	2	1
Houghton	6	4	1
Huron	2	2	0
Ingham	13	12	6
Ionia	6	4	2
Iosco	5	2	0
Iron	2	2	0
Isabella	3	3	0
Jackson	14	10	1
Kalamazoo	21	11	5
Kalkaska	2	1	0
Kent	33	25	9
Lake	3	2	0
Lapeer	6	6	0
Leelanau	2	1	0

County	Number Submitted	Number Tested	Number Positive
Lenawee	10	6	3
Livingston	30	22	2
Luce	3	2	0
Mackinac	4	1	0
Macomb	7	7	1
Manistee	2	1	1
Marquette	2	2	0
Mason	6	3	1
Mecosta	11	10	0
Menominee	1	1	0
Midland	22	18	6
Missaukee	2	2	0
Monroe	6	5	1
Montcalm	1	1	0
Muskegon	16	16	4
Newaygo	6	3	1
Oakland	3	3	2
Oceana	2	2	0
Ogemaw	1	1	0
Ontonagon	1	1	0
Osceola	3	1	0
Oscoda	1	1	1
Ottawa	14	13	2
Roscommon	6	3	0
Saginaw	58	44	11
Sanilac	4	2	0
Shiawassee	3	3	0
St Clair	5	5	1
St Joseph	9	7	2
Tuscola	15	12	2
Van Buren	8	6	1
Washtenaw	13	10	3
Wayne	5	4	3
Wexford	9	4	0
Total	540	400	89

Positive Counties 33

- 2003 -
CORVIDS* REPORTED BY ZIP CODE
As of October 30, 2003

*Corvids are birds from the family Corvidae
e.g., crows, ravens, and blue jays.



Legend

Number of Corvids*
Reported for WNV
by Zip Code Area

None

1 - 8

9 - 25

26 - 71

County Boundary

Data collected from the
*West Nile Virus Sick and Dead Bird
Observation Report Form*, online at
<http://www.michigan.gov/westnilevirus>



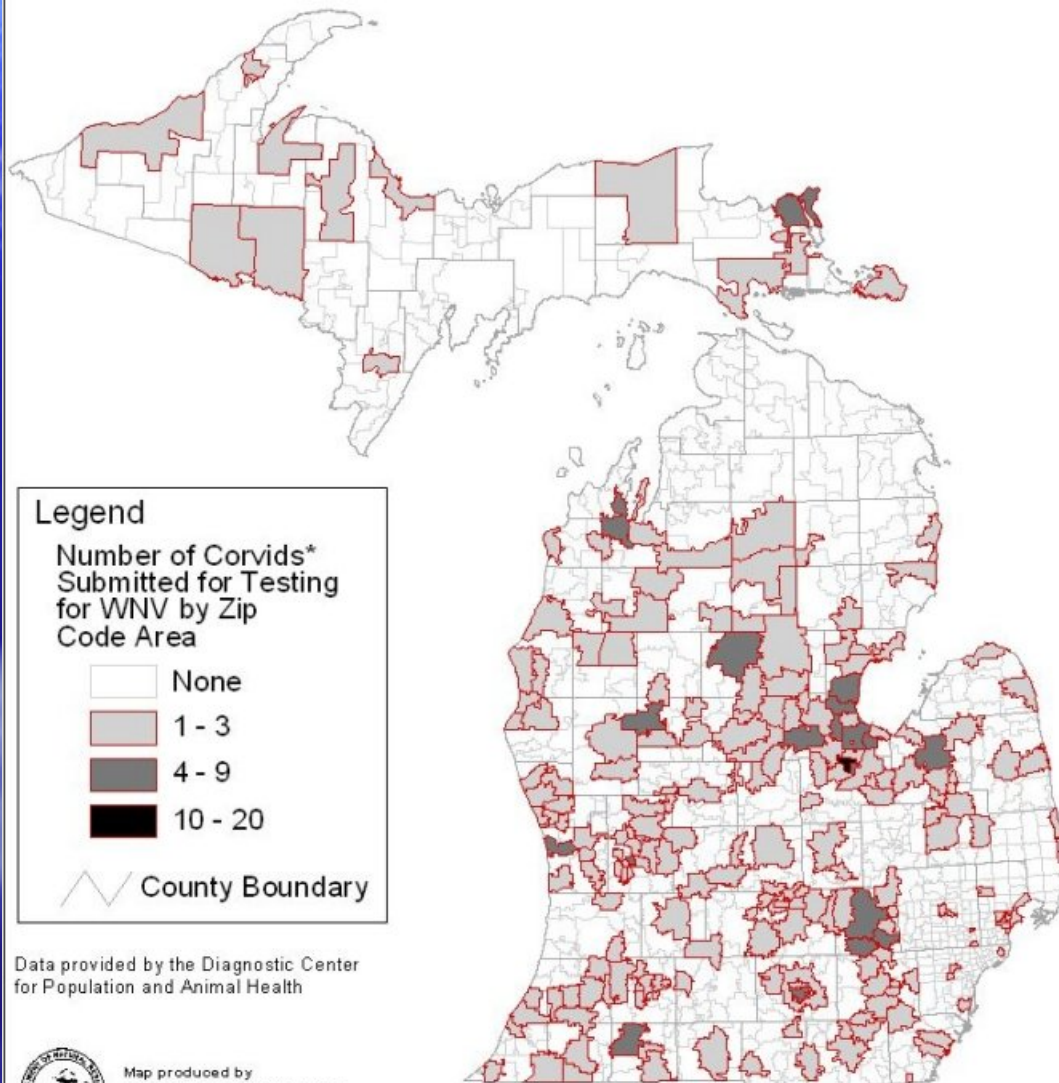
Map produced by
Michigan DNR Wildlife Division
(Revised October 28, 2003)

2003 Reporting

- 5537 Reports received via Website
- 6818 Total animals reported
- 1814 Corvids reported

- 3985 Reports received from county surveillance
- 4281 Total animals reported
- 1774 Corvids Reported

- 2003 -
CORVIDS* SUBMITTED FOR WEST NILE VIRUS
TESTING BY ZIP CODE
As of December 31, 2003



2003 Submissions

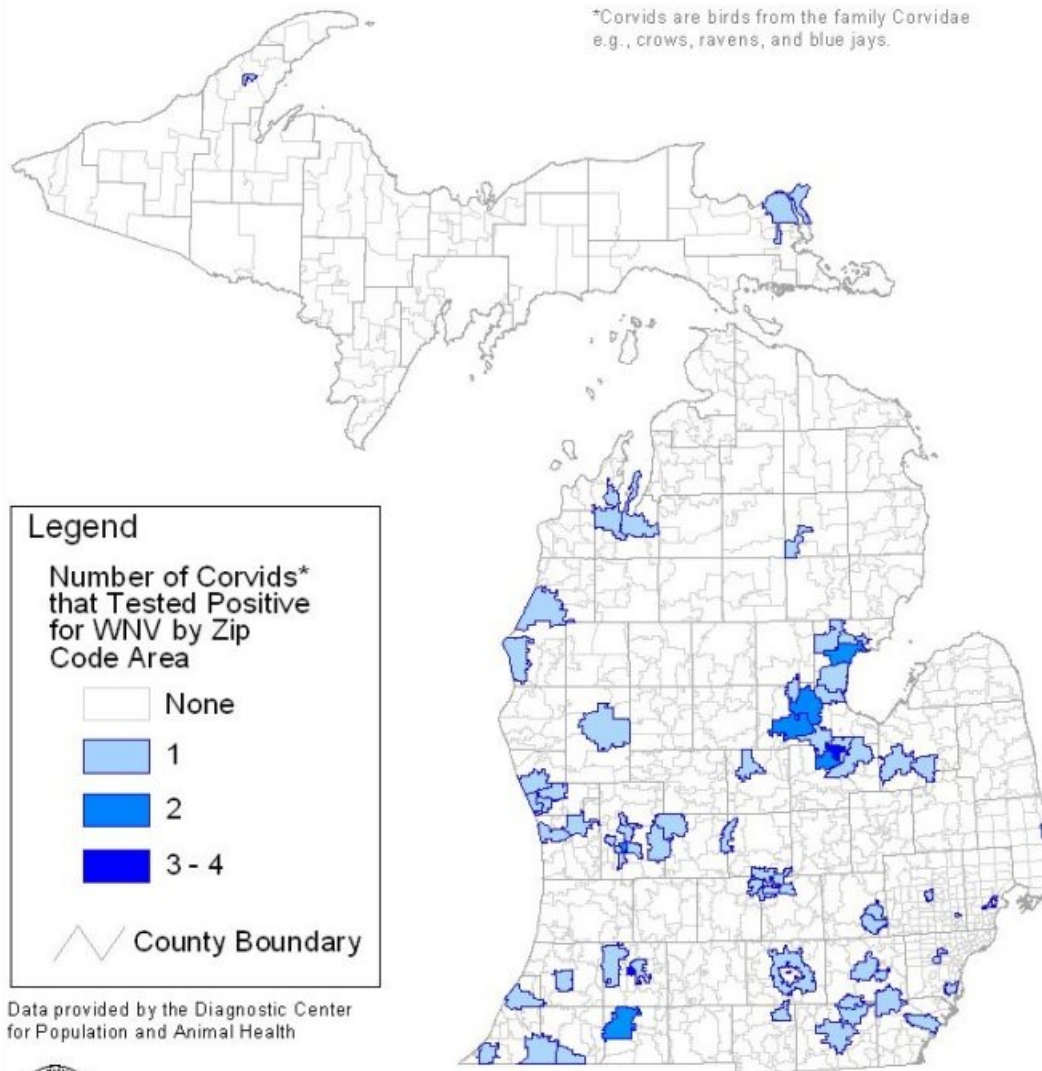
540 Corvids submitted

400 tested

70 Counties

- 2003 -
POSITIVE CORVIDS* BY ZIP CODE
As of December 31, 2003

*Corvids are birds from the family Corvidae
e.g., crows, ravens, and blue jays.



Data provided by the Diagnostic Center
for Population and Animal Health



Map produced by
Michigan DNR Wildlife Division
(Revised January 16, 2004)

2003 Testing Results

89 Positive Corvids

33 Counties

75 Zip Codes

